DOCUMENT RESUME

ED 362 278 PS 021 697

AUTHOR Mantzicopoulos, Panayota Y.; And Others
TITLE Analysis of Social and Personality Variables as Predictors of Preacademic Competence among Disadvantaged Preschoolers.
PUB DATE 27 Mar 93
NOTE 46p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (60th, New Orleans, LA, March 25-27, 1993).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; Adjustment (to Environment); *Child Behavior; Cognitive Ability; *Disadvantaged Youth; Early Intervention; Family Environment; *Interpersonal Competence; *Predictor Variables; *Preschool Children; Preschool Education; Self Concept; Stress Variables
IDENTIFIERS Parent Expectations; *Project Head Start

ABSTRACT

This study collected data on 112 disadvantaged preschoolers in central Indiana to determine predictors of preacademic competence at the end of the Head Start year. Parents were interviewed to assess home educational environment, parenting dimensions, and daily stress factors. Teacher ratings of children's behavior, social skills, and competence in the cognitive, physical, and peer domains were also collected. Children were tested to determine cognitive ability, achievement, and perceptions of their competence. Regression analyses were conducted to identify predictors of competence as defined by achievement on a standardized test, teacher ratings of cognitive competence, and children's self-ratings of intellectual competence. Results indicated that achievement was best predicted by parent expectations, teacher ratings of children's cognitive competence, and externalizing behavior. Significant predictors of teacher-rated student competence were children's adaptive behaviors and parent involvement. Educational activities at home and daily stress factors were predictors of children's self-rated cognitive competence. (Author/MM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 362 278

Analysis of social and personality variables as predictors of preacademic competence among disadvantaged preschoolers

Panayota Y. Mantzicopoulos
Jill Braun Morelock
Michelle Dupree

Department of Educational Studies
Purdue University

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Panayota Y. Mantzicopoulos
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"

Paper presented at the 1993 meeting
of the Society for Research in Child Development
March 27, 1993

PS 021697

The authors wish to thank Linda Stephenson and Vicki Benckenstein for their invaluable administrative support.

Abstract

Data were collected on 112 disadvantaged preschoolers in Central Indiana to determine predictors of preacademic competence at the end of the Head Start year. Parents were interviewed to assess home educational environment, parenting dimensions, and daily stressors. Teacher ratings of children's behavior, social skills, and competence in the cognitive, physical and peer domains were also collected. Children were tested to determine cognitive ability, achievement and perceptions of their competence. Regression analyses were conducted to identify predictors of competence as defined by achievement on a standardized test, teacher ratings of cognitive competence, and children's self-ratings of intellectual competence. Results indicated that achievement was best predicted by parent expectations, teacher ratings of child's cognitive competence, and externalizing behavior. Significant predictors of teacher-rated student competence were children's adaptive behaviors and parent involvement. Educational activities at home and daily hassles were predictors of children's self-rated cognitive competence.

Analysis of social and personality variables as predictors of preacademic competence among disadvantaged preschoolers

Numerous factors contribute to the classification of young children as "at risk" for failure in the school setting. Previous research has established that social demographic variables, such as SES, are strong predictors of academic achievement (Anglum, Bell, & Roubinek, 1990; Archer & Edwards, 1982). Young children from economically impoverished backgrounds are more commonly found to be at risk for both academic and behavior problems (Morrison, Mantzicopoulos & Carte, 1989). SES, however, is a static variable that only provides a categorical index of parents' position (Dolan, 1983). It conveys information neither on the quality of the home environment, nor on the educational attitudes and activities of parents and children as they relate to school competence. Furthermore, it implies that a high degree of uniformity characterizes the educational home environments of economically disadvantaged families.

Although this implication appears reasonable on the surface, there is no evidence in support of the notion that lack of variation exists in the educational attitudes and literacy practices among families who live in economic poverty. Since children's adjustment and achievement in early school years has long-term implications for children's educational progress (Alexander & Entwisle, 1988; Lazar & Darlington, 1982; Schweinhart, Weikart, & Larner, 1986), it is important to explore

family educational process variables in order to examine their unique contributions to children's development.

Relatively limited research has examined the effects of non-static, process variables related to academic competence in disadvantaged young children. Existing research, conducted with diverse samples of elementary school children, indicates that both home environment and child characteristics are related to academic competence (Anglum et al, 1990; Archer & Edwards, 1982; Dolan, 1983). For example, the study by Anglum and his colleagues (1990) was based on elementary school students in small town and rural communities and examined the relationship of social and literacy variables in the home with reading achievement. Consistent with previous studies, educational level of the father was the single best predictor of achievement. However, home literacy variables, i.e., reading to the child before school entry, frequency of visits to the public library, and the variety of print materials in the home, were the strongest predictors of reading performance at first and second grade.

Similarly, Archer and Edwards (1982) in a study of predominantly disadvantaged kindergarten children examined the usefulness of teacher ratings of the child's home background and the child's personal characteristics in predicting performance on standardized achievement tests three years into the child's schooling. Variables used to make up the home background block were socioeconomic status, parental school visits, and encouragement of the child's school work. The set of variables

defining personal characteristics was based on teacher ratings of children's (a) future success in school, self-esteem, creativity, and abstract thought; and (b) problems in the areas of language, behavior, and physical abilities. Results indicated that home and personal variables explained 35% of the variance in English achievement, 28% in Math achievement, and 33% in overall cognitive ability assessed by the Otis-Lennon test.

Similar results were obtained by Dolan (1983) in his study of urban elementary school students in grades 2 through 6. This study made a unique contribution because it simultaneously investigated the relationship of the literacy environment in the home to: (a) academic competence, as measured by standardized tests; (b) teachers' ratings of students' affective resources (i.e., interpersonal relationships, self-esteem, competence, productivity, and responsibility); and (c) students' self-rated competence, behavior, and feelings in the classroom. The measure of home educational environment (HEE) used in this study assessed parents' knowledge, interest, and support of academic activities, parent-child interaction on school-related activities, and parents' beliefs on the value of education for their children. Results supported a strong positive relationship between HEE and achievement. In addition, student-rated self-competence, and teachers' ratings of student affective resources were both significantly related to HEE. Although the home environment measure was based on four subscales, only correlations with the overall HEE composite were examined in the study. Information on

the relationship of each HEE subscale with competence was not reported. Despite this limitation, Dolan's study questioned the assumption that children living in a "culture of poverty" have uniform literacy experiences and highlighted the need to identify aspects of the home environment that "are alterable and open to intervention." (Dolan, 1983, p. 93). In addition, the study provided a glimpse on the relationship of home literacy to different indices of competence based on an "objective" measure of achievement, teacher-rated student competence, and student self-rated competence.

In addition to home environment, stressful life events are another important set of variables that appear to be related to children's school adjustment. Support for this view comes from a recent, 2-year investigation of third through fifth grade students (Dubow, Tisak, Causey, Hryshko, & Reid, 1991). This study indicated that stressful life events were significantly related to both academic achievement, and teacher-rated problems at time 1. However, stressful life events did not predict adjustment two years later. Only increases in social support and social problem-solving skills were predictive of behavioral and academic adjustment. However, subject attrition was a major limitation that affected the interpretation of data in this study. Nevertheless, the findings suggested the need for continued research in this area in order to further examine the mediating role of daily hassles in children's school achievement and social adjustment.

The present study explores the social correlates of preacademic competence with a sample of economically disadvantaged preschoolers. It investigates: (a) parent's educational beliefs and practices, (b) parenting dimensions; (c) parents' school involvement; (d) daily hassles and uplifts; (e) children's positive and negative feelings about school; (f) children's social skills and behavioral adjustment; and (g) children's perceptions of competence and social support. Using information from the variables listed above, the present study examines their differential ability to predict preacademic competence as defined by: (a) a standardized measure of preacademic achievement; (b) teacher-ratings of children's cognitive competence; and (c) young children's self-perceptions of cognitive competence.

METHOD

Subjects

The subjects for this study came from a population of 134 children who attended a Head Start center in central Indiana during 1991-92. All children were participants in a longitudinal study designed to provide an effective transition from Head Start to kindergarten and elementary school. However, because only 112 parents completed the family instruments, this report is based on 112 children and their parents on whom complete data were available on the variables that were selected for this study. The mean IQ for this sample of children was 94.02 (*Sd*=12.17) Their

ages ranged from 54 to 69 months with a mean age of 62.27 (Sd=15.07) months. There were 57 (50.9%) girls and 55 (49.1%) boys. The ethnic background of the children was as follows: 87 (77.7%) were Caucasian; 19 (17.0%) were African-American; and 4 (4.5%) Other. All children came from economically disadvantaged families. Information on mothers' education levels was available on 105 participants. Of those, 28 (26.6%) had not completed high school; 52 (49.5%) were high school graduates; 24 (22.8%) had completed 1-3 years of college; and 1 was a college graduate. Employment information was available on 106 mothers with the majority (59.8%) being unemployed.

Instruments

Kaufman Assessment Battery for Children (K-ABC). The K-ABC (Kaufman & Kaufman, 1983) is a recently developed alternative to the traditional intelligence test. It is a carefully standardized measure that yields a Mental Processing Composite (MPC) and has separate achievement scales. The short form of the test, recommended for research and screening purposes, was used in this investigation to provide an index of children's cognitive ability (Applegate & Kaufman, 1989; Kaufman & Applegate, 1988).

In addition, children were tested at the end of the year with the K-ABC achievement battery. Information from the Reading/Decoding, Riddles, Faces and Places, and Arithmetic subtests was used in the present investigation. Specifically, The Reading/Decoding subtest assesses the child's ability to identify letters and read words. In Riddles, the child is

provided with a list of characteristics descriptive of an object and is asked to infer the name of that object. The Faces and Places scale assesses the child's ability to identify well known personalities (i.e., Santa Claus) and places (i.e., map of USA). The Arithmetic subtest assesses the child's knowledge and understanding of number concepts. All achievement and cognitive subscales provide standard scores with M=100 and Sd=15. An index of preacademic achievement was obtained by averaging the achievement subtest scores for each child (Kaufman & Kaufman, 1983).

Pictorial Scale of Perceived Competence and Social Acceptance for Young Children. Developed by Harter and Pike (1984), this measure allows children to: (a) evaluate their competence in the cognitive/academic and physical domains; and (b) express their sense of support/acceptance from peers and family. This 24-item scale provides separate norms for boys and girls in preschool through second grade. Harter and Pike report alpha reliabilities ranging from 0.50 to 0.85 across subscales and age-groups of children. This scale also includes a teacher rating form that allows teachers to evaluate the child's cognitive/academic and physical competence as well as his/her peer relationships. Because little has been published on the teacher rating scale, alpha reliabilities were computed using data from the current sample of 132 children on whom teacher ratings were available. Alpha coefficients were 0.83, 0.81, and 0.74 for the cognitive/academic, peer, and physical competence

dimensions, respectively.

Social Skills Rating System (SSRS) . Constructed by Gresham & Elliott (1990), this 3-point rating scale has a preschool teacher rating form that provides information on social skills and problem behaviors. The social skills dimension includes the following subscales: cooperation, assertion, and self-control. The problem behaviors dimension is made up of two subscales that assess externalizing and internalizing behaviors. The factorial validity of the SSRS has been established with several samples across the United States. Alpha coefficients for the scale range from 0.74 to 0.95.

Conners' Teacher's Rating Scale (CTRS). Constructed by Conners (1990), this checklist allows the teacher to rate the child's behavior on the following dimensions: conduct problems, hyperactivity, and inattentive-passive behavior. Behaviors are scored on a 4-point scale (1=not a problem; 2=minor problem; 3=pretty much a problem; and 4=very much a problem). The factorial validity of this scale has been supported in a study by Goyette, Conners, and Ulrich (1978).

Parent/Family Involvement Index (PFII). Constructed by Cone, Delawyer, & Wolfe (1985), this instrument is used to assess the degree of parent participation and involvement in their child's education. The 63-item instrument had been designed for use with parents of exceptional children and was adapted for use with parents of nonhandicapped children during the pilot phase of the investigation. Three of the original 12 subscales were

reading.

The first three subscales of the instrument by Stipek et al. (1992) were standardized on a diverse sample of 552 parents of preschool and kindergarten children. Factor analyses of these scales supported the existence of three factors. The first factor (alpha=0.85) is made up of 9 items that assess parents' didactic beliefs. The second factor (alpha=0.84), entitled Formal Teaching Activities, assesses the extent to which parents engage in teaching letters or numbers to their children at home. The third factor (alpha=0.78), labeled Informal Teaching Activities, assesses the extent to which parents engage in informal learning activities with their children in the context of everyday activities.

In addition to these three factors this questionnaire asked parents to respond to three questions that assessed parent expectations (i.e., how far they think their child will go in school, how smart they think their child is compared to other children, and how well they think their child will do in elementary school). The alpha computed for the three parent expectation items, using data from the current sample, was 0.63.

Finally a 14-item scale asked parents to rate, on a 5-point scale (1=never, 5=Very Often) their child's positive and negative feelings about school. The psychometric characteristics of this scale were established with the current sample. A principal component analysis followed by a varimax rotation supported the existence of two factors (see Appendix 1). The first factor

inappropriate for nonhandicapped populations and were not used in the 46-item adapted form. The PFII procedures for administration and scoring recommended for the original form of the scale were strictly followed. The PFII is completed by the child's teacher who notes the presence or absence of parent participation on items representing 9 categories such as: contact with teacher, transportation, observations at school, educational activities at home, attending parent education meetings, classroom volunteering, parent-parent contact and support, involvement with administration, and involvement with fund raising activities. In an evaluation of the instrument, the PFII was completed on 229 families by 65 teachers in three different states. The inter-rater reliability of the instrument is high. Independent ratings of teachers and aids on the same families indicated agreement ranging from 85% to 100% with a mean of 94% (Cone, DeLawyer, & Wolfe, 1985).

Parent Literacy Activities Questionnaire. This questionnaire included scales developed by Stipek, Milburn, Galluzzo, & Daniels (1992) and Elster (1992). The measures developed by Stipek and her associates (1992) were: (a) parent didactic beliefs; (b) formal/informal academic activities in the home; (c) three items measuring parent expectations; and (d) a scale assessing children's feelings about school. The items developed by Elster (1992) provided information on reading and writing opportunities at home, availability of books at home, visits to the library, hours of watching television, and parents' attitudes towards

(alpha=0.81) was labeled, Positive School Feelings, whereas the second factor (alpha=0.74) was entitled Negative School Feelings. Based on the results of this factor analysis, factor scores were created by averaging the scores of items that loaded on each factor.

The Combined Hassles and Uplifts Scale (Lazarus & Folkman, 1989). This scale assesses the frequency and severity of events appraised by individuals as stressful or uplifting. The scale taps concerns about security, time pressures, work, household responsibilities, health, inner concerns, financial responsibilities, and neighborhood and the environment. Alpha reliabilities for this scale range from 0.79 to 0.91. High correlations between the total scores for frequency and severity of both stressful and uplifting events were obtained with this sample of parents. Specifically, the correlation between frequency and severity of hassles was 0.88 and the correlation between frequency and severity of uplifts was 0.89. Thus only frequency of hassles and uplifts was included in the analyses.

Parenting Dimensions Inventory (PDI). (Slater & Power, 1987). This 26-item inventory is completed by the child's parent and scored on a 6-point scale (1=not at all descriptive of me, 6=highly descriptive of me). It is composed of three factors that assess nurturance, responsiveness, and control. The internal consistency of the PDI was established with diverse samples of Anglo, Japanese, and African-American mothers of preschool children. Alpha coefficients ranged from 0.67 to 0.77 for the

nurturance dimension, 0.34 to 0.58 for responsiveness to child input and 0.56 to 0.77 for consistency of parenting practices.

Summary of Assessments

In March-April 1992 children were individually assessed with the short form of the K-ABC cognitive ability battery. In April-May teachers rated each child on competence (Harter & Pike, 1984), behavior problems (Conners, 1990), and social skills (Gresham & Elliott, 1992). At that time teachers also completed the Parent/Family Involvement Index on the parents participating in the study. Children's perceptions of their competence (Harter & Pike, 1984) were assessed in April. In May-June children were individually tested with the K-ABC achievement scales. Parents completed the family assessments during May, June, and July. Approximately 62% of the parents completed the family interviews at the school site. The remaining 38% of the parents were not able to meet with the investigators at the school site because of lack of transportation. These parents were visited at their homes by an interviewer who administered the family instruments.

Results

Overview

Pearson product-moment correlations were first computed to examine the relationships between the variables of the study. First the correlations between the three indices of competence were examined. Scores on the K-ABC achievement battery correlated with both teacher-rated student competence ($r=0.35$, $p<0.05$) and child self-rated competence ($r=0.18$, $p<0.05$).

However, children's self-ratings were not correlated with teacher ratings of children's competence.

The intercorrelations between all variables in the study were examined next. The high intercorrelations observed between behavior problems and social skills necessitated a reduction of these data to meaningful dimensions using factor analytic techniques.

Following the data reduction analyses, the matrix of correlations was examined to select variables significantly correlated with preacademic competence as defined by preacademic achievement, teacher ratings of students, and children's self-ratings.

Stepwise regression analyses were then conducted to identify sets of significant predictors of preacademic achievement, teacher-rated student competence, and children's self-rated competence.

Social skills and behavior:

Reducing data to meaningful dimensions

An examination of the correlation matrix for the Social Skills Rating System (SSRS) and the Conners' Teachers' Rating Scale (CTRS) revealed a number of high, statistically significant ($p < 0.05$) associations between the subscales of these two instruments. As can be seen in Table 1, only the SSRS Assertion and the CTRS Hyperactivity subscales were not correlated ($r = -0.09$). The coefficients for all other scales were

Insert Table 1 about here

statistically significant ($p<0.05$) and ranged from 0.24 to 0.83. This strongly suggested that the subscales of these two instruments assessed overlapping constructs.

A factor analysis was performed to reduce the number of variables in order to obtain a smaller yet meaningful set of factors measuring each behavioral/social skills dimension. To achieve this end, scores on the SSRS and CTRS subscales were subjected to a principal components analysis followed with a varimax rotation. The criteria established for retaining variables that defined a factor were: (a) eigen values greater than 1; (b) high factor loadings (>0.35); (c) no substantial cross-loadings (< 0.26); and (d) contribution to the internal consistency of the factor. Using these procedures, two factors were extracted with eigen values greater than 1. The factor loadings of variables on each factor are presented in Table 2.

Insert Table 2 about here

The first factor, entitled externalizing behavior, was defined by two CTRS subscales (Hyperactivity, and Conduct Problems) and the SSRS Externalizing subscale. These subscales assessed acting out, argumentative, uncooperative, disruptive, or excitable and impulsive behavior.

The second factor was composed of two SSRS subscales. The SSRS Assertion subscale had a high positive loading (0.90) on that factor while the Internalizing subscale had a high negative loading (-0.73). Examination of the Assertion subscale revealed that 6 of its 9 items reflect a child's ability to initiate and maintain positive social relationships with peers (i.e., makes friends easily, gives compliments to peers, acknowledges compliments or praise from peers, initiates conversations with peers, invites others to join in activities, and volunteers to help peers with classroom tasks). The remaining three items tap the student's ability to appropriately question rules, to compliment him/herself when appropriate, and to communicate with his/her teacher when unfair treatment has been received. The Internalizing subscale items, on the other hand, reflect a child's tendency for loneliness, anxiety, and lack of self-confidence. Considered collectively, items on the Assertion and Internalizing subscales most closely assessed a child's ability to function effectively in the school environment. The second factor was thus labeled Positive Social Behavior.

The remaining three subscales (i.e., SSRS Self-Control, SSRS Cooperation, and CTRS Passivity) had substantial crossloadings on both factors and were dropped from all subsequent analyses.

The internal consistency of each factor was computed using Cronbach's alpha. Alpha coefficients were 0.89 and 0.92 for the Externalizing and Positive Social Behavior factors respectively. Following this analysis, unweighted factor scores were derived

for each factor by averaging scores for the subscales defining each of the two factors.

Correlates of preacademic competence

Family functioning. Contrary to expectation none of the dimensions assessed by the Parenting Dimensions Inventory (PDI) correlated with preacademic achievement (assessed by the K-ABC achievement battery), teacher-rated, and student self-rated cognitive competence. Similarly, family hassles and uplifts, did not correlate with either preacademic achievement or with teacher-rated student competence. However, family hassles had low, yet statistically significant negative correlations with children's self-ratings of cognitive competence ($r<-0.24$, $p<0.01$), physical competence ($r=-0.23$, $p<0.01$), and maternal acceptance ($r=-.0.21$, $p < 0.03$).

Home literacy activities. The Parent Literacy Activities Questionnaire was examined next. The subscales assessing parents' formal and informal educational activities in the home (Stipek et al., 1992) were significantly correlated with children's perceptions of competence ($r=0.24$ and $r=0.31$, for formal and informal activities respectively, $p<0.01$). In addition, scores on the informal educational activities subscale had low, yet significant correlations with preacademic achievement ($r=0.16$, $p< 0.05$). Parent expectations for their child also correlated moderately with achievement ($r=0.38$; $p<0.001$). Finally, writing opportunities provided at home (Elster, 1992) correlated positively with teachers' perceptions of the children's cognitive

competence (r=0.24, P< 0.01) and with children's self-ratings of competence (r=0.33, p < 0.001).

Mother's school involvement. None of the dimensions of the Parent/Family Involvement Index (Cone et. al, 1985) were related to preacademic achievement and student self-rated competence. However, low to moderate, statistically significant correlations were obtained between several of the PFII subscales and teachers' ratings of the child's cognitive competence. Specifically, teachers were more likely to rate as more cognitively competent those children whose mothers were: (a) involved in educational activities with their child at home (r=0.36, p<0.001), (b) engaged in support activities with other parents (r=0.22, p<0.01), and (c) helpful in transporting children to and from school (r=0.21 (p<0.02). At the same time, teachers tended to rate as less cognitively competent those children whose mothers were more likely to be involved with policy and administrative procedures in the school (r=-0.29, p<0.01).

Adaptive and maladaptive child behaviors. Teacher ratings on the Externalizing and Positive Social Behavior factors were both related to preacademic achievement. Specifically, children with higher scores on externalizing behaviors were more likely to score lower on the K-ABC achievement subscales (r=-0.24, p <0.01). Conversely, children who were rated by their teachers as demonstrating socially adaptive behaviors were more likely to perform higher on preacademic achievement (r=0.27, p <0.01).

Contrary to expectation, externalizing behavior was not

related to teachers' ratings of children's cognitive competence. However, scores on the Positive Social Behavior factor were moderately related to teacher ratings ($r=0.38$, $P<0.05$), indicating that teachers tended to perceive as more competent those children who demonstrated adaptive social behaviors in the classroom.

Prediction of preacademic competence

Because of the large number of variables in this study it is not possible to present the full correlation matrix between predictor and outcome variables. Rather, three smaller tables of intercorrelations are presented for each analysis conducted. The selection of independent variables for inclusion in each stepwise regression analysis was made on the basis of significant correlations with each of the three dependent variables. In some cases subscales from the same instrument were significantly ($p<0.05$) correlated with each other and with the dependent variable. In those cases, the subscale selected for the regression analysis was the one with the highest correlation with the dependent variable under consideration.

Prediction of preacademic achievement. Variables meeting the criteria discussed above were parent expectations, externalizing behaviors, positive social behavior, teacher ratings of children's cognitive competence, and children's self-ratings of cognitive competence. Intercorrelations among these subscales and the K-ABC Achievement composite scores are presented in Table 3.

Insert Table 3 about here

Social predictors of preacademic achievement were identified using stepwise multiple regression analysis, yielding a 3-predictor model. Results, summarized in Table 4, reveal that significant predictors were parent expectations, teacher-rated

Insert Table 4 about here

cognitive competence, and externalizing behaviors. Positive social behavior and children's self-rated cognitive competence did not qualify for inclusion in the equation.

Parent expectations entered the equation first (multiple R = 0.40) accounting for 16% of the variance. With teacher-rated student competence added to the equation (multiple R = 0.50), 25% of the variance was explained. Externalizing behavior was the last variable to enter the equation (multiple R = 0.54). Therefore, with all three predictors in the model, 30% of the variance in preacademic achievement was explained.

Prediction of teacher-rated student competence. The intercorrelations among variables considered for this analysis are presented in Table 5. The PFII Parent Support

Insert Table 5 about here

subscale was not included in the regression analysis because of

its high correlation with the PFII Parent Education Activities subscale (r=0.63), another significant predictor of teacher-rated cognitive competence (r=0.36).

The resultant 4-predictor model accounted for 46% of the variance in teacher perceptions of children's cognitive competence. As shown in Table 6 children's positive social behaviors entered the equation first accounting for 14% of the variance (R=0.38). Parent involvement variables entered in subsequent steps. Parent involvement with the child's education at home was the second significant predictor (R=0.52), positively associated with competence. Parent involvement with policy and administration was the third predictor (R=0.67), negatively associated with teacher-rated competence. Involvement with transportation entered the equation last (R=0.68) and was positively associated with the dependent variable.

Insert Table 6 about here

Prediction of children's self-rated competence. Variables considered for this analysis were informal academic activities in the home, children's positive feelings about school, writing opportunities at home, and frequency of daily hassles. The correlations among these variables are presented in Table 7. A stepwise multiple regression analysis resulted in

---

Insert Table 7 about here

---

a 3-predictor model accounting for 20% of the variance in children's self-ratings of cognitive competence. Informal academic activities in the home entered the equation as the first predictor (R=0.33), opportunities for writing at home entered second (R=0.42), and frequency of daily hassles reported by the child's mother entered last (R=0.45). Results are presented in

---

Insert Table 8 about here

Table 8. These results suggest that young children are more likely to see themselves as cognitively competent if parents engage them in learning opportunities that involve reading and writing in the context of daily activities. The presence of stressful events in the parents life however, seems to negatively affect children's positive images of intellectual competence.

DISCUSSION

The present study attempted to identify significant predictors of competence assessed by three indicators: a standardized preacademic achievement battery, teacher ratings of children's competence, and children's self-rated competence. Although both children's and teachers' ratings were correlated with achievement, the associations were moderate to low. This suggested that the three outcome variables are not overlapping dimensions and provided a basis for the need of separate assessments of their unique relationships to social-environmental and personality variables.

The results of this study are consistent with previous research examining the influence of home literacy variables on children's competence (i.e., Anglum et al., 1990; Archer & Edwards, 1982; Dolan, 1983). Our findings further suggest that home environment variables and children's personality characteristics are factors that jointly predict competence.

Specifically, the analyses conducted to identify predictors of preacademic achievement indicated that parent expectations and teacher perceptions of the child are strongest predictors of performance on the K-ABC battery. Thus positive attitudes from both parents and teachers about the child's intellectual competence early on are associated with the child's ability to perform well on "objective" measures of achievement.

These findings are consistent with the literature on the effects of teacher expectations on student achievement (see for example, Braun, 1976; Brophy & Good, 1974). However, parent expectation effects were stronger than teacher perceptions in this study, a finding that must be evaluated in light of more recent work with elementary school children. This research has indicated that beyond teacher expectation variables, parents play an important role in shaping children's perceptions of their abilities and their actual school performance (Entwisle & Hayduk, 1982; Hess, Holloway, Dickson, & Price, 1984; Ladd & Price, 1986; Phillips, 1987). For example, Entwisle and Hayduk (1982) in their study of middle-class parents reported that parent expectations had the strongest effect on their child's

early academic achievement. Our findings, based on a sample of disadvantaged preschoolers, are compatible with this view and indicate that parental beliefs and expectations about their children's competence are stronger predictors of academic performance than teacher expectations alone.

When considering variables related to teacher perceptions of the child's competence, the picture that emerges is one that combines both child and family characteristics. Our results suggest that preschool teachers are more likely to perceive as highly competent those children who exhibit adaptive, cooperative social behaviors in the classroom. In addition, knowledge of the parent's involvement in educational activities with their child at home is positively associated with teacher's positive perceptions of the child's competence. However, the negative association between teacher perceptions of the child and parental involvement in administrative procedures must be evaluated in view of existing school policies. Head Start has a strong emphasis on early identification of children with exceptionalities. In the particular preschool setting where this study was conducted, parents whose children had discipline, or transportation problems, or were, in some cases, considered for emotional, cognitive, physical, or other delays, would be in greater contact with administrative personnel. Therefore, the negative association of teacher's perceptions with parent involvement in this area is merely a reflection of this phenomenon.

The examination of social-environmental variables related to children's self-perceptions of competence also revealed significant associations with home educational variables and daily stressors. The finding that involvement in academic activities at home influences preschool children's perceptions of competence is supported by existing motivation research (Stipek & MacIver, 1989). This research indicates that young children consider hard work (effort) as the primary indicator of cognitive competence (Nicholls & Miller, 1984). Stipek and MacIver (1989) argue that because young children believe that effort results in competence, "they may conclude that they are competent at frequently practiced tasks." (p. 527). This interpretation is further supported by children's own explanations of competence in the research conducted Harter and Pike (1984). In that study young children attributed their high cognitive competence to factors such as "reading a lot at home," or "practicing a lot." The results of the present study are consistent with this view. It thus appears that parents who report engaging in educational activities with their children at home are more likely to provide children with opportunities for skill practice. These activities in turn contribute to the development of children's positive self-perceptions of intellectual competence. In this environment, the presence of daily stressors seems to also negatively affect perceptions of competence, perhaps by indirectly disrupting the continuity and stability of the educational home environment.

The results of the present study challenge the assumption that children from economically deprived backgrounds are exposed to a uniform set of educational experiences in the home. Not only are their home literacy experiences varied, but they are also predictive of early competence. Furthermore, home literacy and parental expectations are open to intervention and are targeted intervention goals in the Head Start transition program. For this reason, although preliminary, the findings lend support to parent education and involvement programs and highlight the need for continued research in this area.

REFERENCES

Alexander, K.L., & Entwisle, D. R. (1988). Achievement in the first two years of school: Patterns and processes. Monographs of the society for Research in Child Development, 53, (2, Serial No. 218).

Anglum, B. S., Bell, M. L., & Roubinek, D. L. (1990). Prediction of elementary student reading achievement from specific home environment variables. Reading Improvement, 27(3), 173-184.

Applegate, B., & Kaufman, A. S. (1989). Short form estimation of the K-ABC sequential and simultaneous processing for research and screening. Journal of Clinical Child Psychology, 18(4), 305-313.

Archer, P., & Edwards, J. R. (1982). Predicting school achievement from data on pupils obtained from teachers: Toward a screening device for disadvantage. Journal of Educational Psychology, 74(5), 761-770.

Braun, C. (1976). Teacher expectation: Sociopsychological dynamics. Review of Educational Research, 46(2), 185-213.

Brophy, J. T., & Good, T. (1974). Teacher-student relationships: Causes and consequences. New York: Holt, Rinehart, & Winston.

Cone, J.D., Delawyer, D. D., & Wolfe, V. V. (1985). Assessing parent participation: The parent/family involvement index. Exceptional Children, 51(5), 417-424.

Conners, K. C. (1990). Conners' rating scales: Manual. N. Tonawanda, NY: Multi-Health Systems.

Dolan, L. (1983). The prediction of reading achievement and self-esteem from an index of home educational environment: A study of urban elementary students. Measurement and evaluation in guidance, 16(2), 86-94.

Dubow, E. F., Tisak, J., Causey, D., Hryshko, A., & Reid, G. (1991). A two-year longitudinal study of stressful life events, social support, and social problem-solving skills: Contributions to children's behavioral and academic adjustment. Child Development, 62, 583-599.

Elster, C. (1992). Family literacy survey. Unpublished manuscript. Purdue University, West Lafayette, IN.

Entwisle, D. R., & Hayduk, L. A. (1982). Early schooling: Cognitive and affective outcomes. Baltimore: Johns Hopkins University Press.

Gresham, F. M., & Elliott, S. N. (1990). Social Skills Rating System: Manual. Circle Pines, MN: American Guidance Service.

Goyette, C.H., Conners, C. K., & Ulrich, R. F. (1978). Normal data on revised Conners parent and teacher rating scales. Journal of Abnormal Child Psychology, 6, 221-236.

Harter. S., & Pike, R. (1984). The pictorial scale of perceived competence and social acceptance for young children. Child Development, 55, 1969-1982.

Hess, R., Holloway, S. D., Dickson, W. P., & Price, G. G. (1984). Maternal variables as predictors of children's school readiness and later achievement in vocabulary and

mathematics in sixth grade. Child Development, 55, 1902-1912.

Kaufman, A., & Applegate, B. (1988). Short forms of the K-ABC mental processing and achievement scales at ages 4 to 121/2 years for clinical and screening purposes. Journal of Clinical Child Psychology, 17(4), 359-369.

Kaufman, A. S., & Kaufman, N. L. (1983). The Kaufman Assessment Battery for Children. Circle Pines, MN: American Guidance System.

Ladd, G. W., & Price, J. M. (1986) Promoting children's cognitive competence: The relation between parents' perceptions of task difficulty and children's perceived and actual competence. Child Development, 57, 446-460.

Lazar, I., & Darlington, R. (1982). Lasting effects of early education. Monographs of the Society for Research in Child Development, 47 (2-3, Serial No. 195).

Lazarus, R. S., & Folkman, S. (1989) Manual for the Hassles and Uplifts Scales. Palo Alto, CA: Consulting Psychologists Press.

Morrison, D., Mantzicopoulos, P., & Carte, E., (1989). Preacademic screening for learning and behavior problems. Journal of the American Academy of Child and Adolescent Psychiatry, 28(1), 101-106.

Nicholls, J., & Miller, A. (1984). Development and its discontents: The differentiation of the concept of ability. In J. Nicholls, (Ed.), Advances in motivation and

achievment: Vol. 3. The development of achievement motivation (pp. 219-250). Greenwich, CT: JAI.

Phillips, D. A. (1987). Socialization of perceived academic competence among highly competent children. Child development, 58, 1308-1320.

Slater, M. A., & Power, T. G. (1987). Multidimensional assessment of parenting in single-parent families. In J. P. vincent (Ed.), Advances in family intervention, assessment, and theory (pp. 197-228). Greenwich, CT: JAI Press.

Schweinhart, L. J., Weikart, D. P., & Larner, M. B. (1986). Consequences of three preschool curriculum models through age 15. Early Childhood Research Quarterly, 1, (1), 15-45.

Stipek, D., & MacIver, D. (1989). Developmental change in children's assessment of intellectual competence. Child Development, 60, 521-538.

Stipek, D., Milburn, F., Galluzzo, D., & Daniels, D. (1992). Parents' beliefs about appropriate education for young children. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Appendix 1

Children's feelings toward school: Item means and factor loadings following varimax rotations.

Item	Factor 1	Factor 2	M	Sd
Likes doing things that involve numbers	0.78	0.02	3.68	1.13
Says good things about school	0.76	-0.22	4.51	0.81
Likes doing things that involve letters	0.76	-0.14	4.03	1.00
Is eager to show you work he/she did at school	0.72	-0.08	4.62	0.86
Says good things about his/her teacher	0.65	-0.18	4.53	0.87
Talks about friends in school	0.60	0.05	4.39	1.00
Complains about school	-0.17	0.82	2.05	1.06
Is reluctant to leave for school in the morning	-0.06	0.73	2.06	1.31
Is upset when parents leave him/her at school	-0.24	0.65	1.72	1.14
Claims he/she can't do school work	0.13	0.64	1.50	0.83
Complains about not having anyone to play with	-0.11	0.60	1.64	1.08
Worries about school work	0.19	0.48	1.52	0.95
Pretends to be sick to stay home from school	-0.21	0.47	1.42	0.92
Is reluctant to talk about what he/she did at school	-0.20	0.37	2.26	1.45

Table 1

Correlations of behavior problems (CTRS) with social skills (SSRS)

	VARIABLE	1	2	3	4	5	6	7	8
1.	Conduct Problems (CTRS)	1.00	0.74*	0.57*	-0.27*	-0.61*	-0.80*	0.83*	0.44*
2.	Hyperactivity (CTRS)		1.00	0.69*	-0.09	-0.57*	-0.70*	0.84*	0.24*
3.	Passivity (CTRS)			1.00	-0.33*	-0.70*	-0.48*	0.58*	0.35*
4.	Self-Assertion (SSRS)				1.00	0.65*	0.47*	-0.26*	-0.46*
5.	Cooperation (SSRS)					1.00	0.68*	-0.62*	-0.51*
6.	Self-Control (SSRS)						1.00	-0.83*	-0.42*
7.	Externalizing Behaviors (SSRS)							1.00	0.30*
8.	Internalizing Behaviors (SSRS)								1.00

*p<0.05

Table 2

Factor loadings of SSRS and CTRS scales following varimax rotations.

Scale	Factor 1	Factor 2
Hyperactivity (CTRS)	0.94	-0.02
Externalizing Behaviors (SSRS)	0.92	-0.17
Conduct Problems (CTRS)	0.86	-0.26
Self-Assertion (SSRS)	0.07	0.90
Internalizing Behaviors (SSRS)	0.22	-0.74
Cooperation (SSRS)	-0.58	0.69
Passivity (CTRS)	0.69	-0.34
Self-Control (SSRS)	-0.78	0.42

Table 3

Correlations of social functioning variables with preacademic achievement

	VARIABLE	1	2	3	4	5	6
1.	Preacademic Achievement (K-ABC)	1.00	-0.26*	0.28*	0.40*	0.35*	0.18*
2.	Externalizing Behavior		1.00	-0.34*	-0.15	-0.05	0.00
3.	Positive Social Behavior			1.00	0.23*	0.37*	0.03
4.	Parent Expectations				1.00	0.12	0.08
5.	Teacher's Rating of Child's Competence					1.00	0.06
6.	Child's Self-Rating of Competence						1.00

*p<0.05

Table 4

Predictors of preacademic achievement: Stepwise regression analysis

Step	Variable	R	beta	T
1	Parent Expectations	0.40	0.33	4.11*
2	Teacher's Rating of Child's Competence	0.50	0.30	3.67*
3	Externalizing Behavior	0.54	-0.20	-2.47*
	Variables not in the Equation			
	Children's Self-Ratings of Competence		0.13	1.69
	Positive Social Behavior		0.03	0.33

*p<0.05

Table 5

Correlations of social functioning variables with teachers' ratings of children's cognitive competence.

	VARIABLE	1	2	3	4	5	6
1.	Teachers' Rating of Competence	1.00	0.38*	0.24*	-0.28*	0.36*	0.21*
2.	Positive Social Behavior		1.00	-0.26*	0.06	0.00	-0.02
3.	Writing Opportunities at Home (1=no, 2=yes)			1.00	-0.05	-0.02	0.02
4.	Mother's involvement with administration (PFII)				1.00	0.27*	0.06
5.	Mother's involvement in educational activities in the home (PFII)					1.00	0.24*
6.	Mother's involvement with transportation (PFII)						1.00

*$p<0.05$

Table 8

Predictors of children's self-ratings of cognitive competence: Stepwise regression analysis

Step	Variable	R	beta	T
1	Informal Academic Activities in the Home	0.33	0.24	2.62*
2	Writing Opportunities at Home	0.42	0.25	2.68*
3	Frequency of Daily Hassles	0.45	-0.18	-1.98*
	Variables not in the Equation			
	Positive Feelings about School	0.01	0.12	

*p <0.05

Table 6

Predictors of teachers' ratings of children's cognitive competence: Stepwise regression analysis

Step	Variable	R	beta	T
1	Positive Social Behaviors	0.38	0.41	5.88*
2	Parent Involvement in Educational Home Activities	0.52	0.45	6.01*
3	Parent Involvement with Administration	0.67	-0.44	-5.97*
4	Parent Involvement with Transportation	0.68	0.14	1.92*
	Variables not in the Equation			
	Writing Opportunities at Home		0.11	1.65

*p<0.05

Table 7

Correlations of social functioning variables with children's self-ratings of cognitive competence.

	VARIABLE	1	2	3	4	5
1.	Child's Self-Rating of Competence	1.00	0.33*	0.33*	0.22*	-0.24*
2.	Writing Opportunities at Home (1=no, 2=yes)		1.00	0.27*	0.39*	1.20
3.	Informal Academic Activities at Home			1.00	0.31*	-0.15
4.	Positive Feelings about School				1.00	-0.20*
5.	Frequency of Daily Hassles					1.00

*p<0.05